- Search History will be lost after eight hours of inactivity.
- To combine searches use # before search number, e.g., #2 AND #6.
- Search numbers may not be continuous; all searches are represented.

Search	Most Recent Queries	Time	Result
#24	**Related Articles** for **PubMed** (Select **9711783**)	14:16:24	435
#22	Search **RSV AND intranasal and attenuated** Field: **Title/Abstract,** Limits: **Publication Date to 2001/09/28**	14:15:27	6
#21	Search **RSV AND intranasal** Field: **Title/Abstract,** Limits: **Publication Date to 2001/09/28**	14:15:20	71
#19	Search **vaccine AND RSV AND attenuated AND intranasal** Field: **Title/Abstract,** Limits: **Publication Date to 2001/09/28**	14:13:48	6
#18	Search **vaccine AND RSV AND attenuated AND intrnasal** Field: **Title/Abstract,** Limits: **Publication Date to 2001/09/28**	14:13:44	0
#16	Search **vaccine AND RSV AND attenuated AND mucosal** Field: **All Fields,** Limits: **Publication Date to 2001/09/28**	14:12:45	6
#9	Search **vaccine AND RSV AND mucosal** Field: **All Fields,** Limits: **Publication Date to 2001/09/28**	13:15:07	31
#7	Search **vaccine AND antibody AND CTL and RSV** Field: **All Fields,** Limits: **Publication Date to 2001/09/28**	11:22:18	12
#4	Search **vaccine AND antibody AND CTL** Field: **All Fields,** Limits: **Publication Date to 2001/09/28**	11:17:22	496
#2	Search **chitosan AND nanosphere AND plasmid** Field: **All Fields,** Limits: **Publication Date to 2001/09/28**	11:02:20	1
#1	Search **chitosan AND nanosphere AND plasmid** Field: **Title/Abstract,** Limits: **Publication Date to 2001/09/28**	10:36:39	0

Clear History

WEST Search History

DATE: Wednesday, October 08, 2003

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=OR		
L3	L1 and (immunogen$5 or antigen or vaccine) same (M2 or m-2 or 22kd or 22 adj (kd or kilodalton or kDa))	82	L3
L2	L1 and (M2 or m-2 or 22kd or 22 adj (kd or kilodalton or kDa))	198	L2
L1	(respiratory adj syncytial) same (antigen or immunogen$4 or vaccine)	1449	L1

END OF SEARCH HISTORY

STN Search History

FILE 'HOME' ENTERED AT 15:15:00 ON 08 OCT 2003

L1 9740 (RESPIRATORY (A) SYNCYTIAL OR RSV) (P) (ANTIGEN OR IMMUN###### OR VACCINE)

L2 220 L1 AND (M2 OR 22KDA OR 22KD OR 22 (A) (KDA OR KD OR KILODALTON))

L6 12149 (ANTIGEN OR IMMUNOGEN OR CTL OR ANTIBODY) (P) (M2 OR 22KDA OR 22KD OR 22 (A) (KDA OR KD OR KILODALTON) OR M2-1 OR M2-2)

L7 47 L5 AND (ANTIGEN OR IMMUNOGEN## OR CTL OR ANTIBODY) (P) (M2 OR 22KDA OR 22KD OR 22 (A) (KDA OR KD OR KILODALTON) OR M2-1 OR M2-2)

L9 28 L8 AND ((RSV OR RESPIRATORY (A) SYNCYTIAL)/TI OR (RESPIRATORY (A) SYNCYTIAL OR RSV)/ABS)

(FILE 'HOME' ENTERED AT 15:15:00 ON 08 OCT 2003)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH' ENTERED AT 15:16:01 ON 08 OCT 2003

L1 9740 S (RESPIRATORY (A) SYNCYTIAL OR RSV) (P) (ANTIGEN OR IMMUN#####
L2 220 S L1 AND (M2 OR 22KDA OR 22KD OR 22 (A) (KDA OR KD OR KILODALTO
L3 45 S L1 AND (M2-1 OR M2-2)
L4 220 S L2 OR L3
L5 91 DUP REM L4 (129 DUPLICATES REMOVED)
L6 12149 S (ANTIGEN OR IMMUNOGEN OR CTL OR ANTIBODY) (P) (M2 OR 22KDA OR
L7 47 S L5 AND (ANTIGEN OR IMMUNOGEN## OR CTL OR ANTIBODY) (P) (M2
L8 36 S L7 NOT PY>2001
L9 28 S L8 AND ((RSV OR RESPIRATORY (A) SYNCYTIAL)/TI OR (RESPIRATOR

L9 ANSWER 1 OF 28 MEDLINE on STN
AN 2002116297 MEDLINE
DN 21840724 PubMed ID: 11851318
TI The development of a mimotope-based synthetic peptide **vaccine** against **respiratory syncytial** virus.
AU Steward M W
CS Immunology Unit, London School of Hygiene and Tropical Medicine, London WC1E 7HT, U.K.. michael.steward@lshtm.ac.uk
SO BIOLOGICALS, (2001 Sep-Dec) 29 (3-4) 215-9.
Journal code: 9004494. ISSN: 1045-1056.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)

L9 ANSWER 2 OF 28 MEDLINE on STN
AN 2001271406 MEDLINE
DN 21214663 PubMed ID: 11312662
TI Chimeric subgroup A **respiratory syncytial** virus with the glycoproteins substituted by those of subgroup B and **RSV** without the **M2-2** gene are attenuated in African green monkeys.
AU Cheng X; Zhou H; Tang R S; Munoz M G; Jin H
CS Aviron, 297 N. Bernardo Avenue, Mountain View, CA 94043, USA.
NC 2R44 AI45267-01/02 (NIAID)
SO VIROLOGY, (2001 Apr 25) 283 (1) 59-68.
Journal code: 0110674. ISSN: 0042-6822.

L9 ANSWER 3 OF 28 MEDLINE on STN
AN 2001139732 MEDLINE
DN 20581177 PubMed ID: 11145691
TI Mucosal delivery of a **respiratory syncytial** virus CTL peptide with enterotoxin-based adjuvants elicits protective, immunopathogenic, and immunoregulatory antiviral CD8+ T cell responses.
AU Simmons C P; Hussell T; Sparer T; Walzl G; Openshaw P; Dougan G
CS Department of Biochemistry, Imperial College of Science, Technology and Medicine, South Kensington, London, United Kingdom.. c.simmons@ic.ac.uk
SO JOURNAL OF IMMUNOLOGY, (2001 Jan 15) 166 (2) 1106-13.
Journal code: 2985117R. ISSN: 0022-1767.

L9 ANSWER 4 OF 28 MEDLINE on STN
AN 2000473581 MEDLINE
DN 20438131 PubMed ID: 10982380
TI Recombinant **respiratory syncytial** virus that does not express the NS1 or **M2-2** protein is highly attenuated and **immunogenic** in chimpanzees.
AU Teng M N; Whitehead S S; Bermingham A; St Claire M; Elkins W R; Murphy B R; Collins P L
CS Respiratory Viruses Section, Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, Bethesda, Maryland, 20892, USA.
NC AI-000087 (NIAID)
AI-000099 (NIAID)
SO JOURNAL OF VIROLOGY, (2000 Oct) 74 (19) 9317-21.
Journal code: 0113724. ISSN: 0022-538X.

L9 ANSWER 5 OF 28 MEDLINE on STN
AN 2000057898 MEDLINE
DN 20057898 PubMed ID: 10590093
TI **Respiratory syncytial** virus that lacks open reading frame 2 of the **M2** gene (**M2-2**) has altered growth characteristics and is attenuated in rodents.
AU Jin H; Cheng X; Zhou H Z; Li S; Seddiqui A
CS Aviron, Mountain View, California 94043, USA.. hjin@aviron.com
SO JOURNAL OF VIROLOGY, (2000 Jan) 74 (1) 74-82.
Journal code: 0113724. ISSN: 0022-538X.
R 6 OF 28 MEDLINE on STN
AN 1999445798 MEDLINE
DN 99445798 PubMed ID: 10515999
TI Interleukin-4 diminishes CD8(+) **respiratory syncytial** virus-specific cytotoxic T-lymphocyte activity in vivo.
AU Aung S; Tang Y W; Graham B S
CS Department of Microbiology, Vanderbilt University School of Medicine, Nashville, Tennessee, USA.
NC RO1-AI-33933 (NIAID)
SO JOURNAL OF VIROLOGY, (1999 Nov) 73 (11) 8944-9.
Journal code: 0113724. ISSN: 0022-538X.

L9 ANSWER 7 OF 28 MEDLINE on STN
AN 1999432220 MEDLINE
DN 99432220 PubMed ID: 10500164
TI The **M2-2** protein of human **respiratory syncytial** virus is a regulatory factor involved in the balance between RNA replication and transcription.
AU Bermingham A; Collins P L
CS Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, 7 Center Drive MSC 0720, Bethesda, MD 20892-0720, USA.

SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1999 Sep 28) 96 (20) 11259-64.
Journal code: 7505876. ISSN: 0027-8424.

ANSWER 8 OF 28 MEDLINE on STN
AN 1999301493 MEDLINE
DN 99301493 PubMed ID: 10374957
TI Synergistic effect of immunization with a peptide cocktail inducing antibody, helper and cytotoxic T-cell responses on protection against **respiratory syncytial** virus.
AU Hsu S C; Chargelegue D; Obeid O E; Steward M W
CS Department of Infectious and Tropical Diseases, London School of Hygiene and Tropical Medicine, UK.
SO JOURNAL OF GENERAL VIROLOGY, (1999 Jun) 80 (Pt 6) 1401-5.
Journal code: 0077340. ISSN: 0022-1317.

L9 ANSWER 9 OF 28 MEDLINE on STN
AN 1999033106 MEDLINE
DN 99033106 PubMed ID: 9813216
TI Recombinant human **respiratory syncytial** virus (**RSV**) from cDNA and construction of subgroup A and B chimeric **RSV**.
AU Jin H; Clarke D; Zhou H Z; Cheng X; Coelingh K; Bryant M; Li S
CS Aviron, 297 North Bernardo Avenue, Mountain View, California, 94043, USA.. hjin@aviron.com
SO VIROLOGY, (1998 Nov 10) 251 (1) 206-14.
Journal code: 0110674. ISSN: 0042-6822.
CY United States

L9 ANSWER 10 OF 28 MEDLINE on STN
AN 1998343733 MEDLINE
DN 98343733 PubMed ID: 9680139
TI Abundant IFN-gamma production by local T cells in **respiratory syncytial** virus-induced eosinophilic lung disease.
AU Spender L C; Hussell T; Openshaw P J
CS Respiratory Medicine, National Heart and Lung Institute, Imperial College School of Medicine at St Mary's, London, UK.
SO JOURNAL OF GENERAL VIROLOGY, (1998 Jul) 79 (Pt 7) 1751-8.
Journal code: 0077340. ISSN: 0022-1317.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; AIDS
EM 199808
ED Entered STN: 19980828
Last Updated on STN: 19980828
Entered Medline: 19980814
AB Respiratory syncytial virus (RSV) is a frequent cause of severe lung disease in young children. Primed T cells are required for virus clearance, but are causally implicated in the enhanced pathology seen following RSV infection of some infants and experimental animals vaccinated against the virus. In BALB/c mice, vaccination with recombinant vaccinia virus expressing the viral attachment protein (G) leads to pulmonary eosinophilia during subsequent infection, which indirect evidence suggests may be due to CD4+ Th2 cells. The production of IFN-gamma, IL-2, -4, -5 and -10 cytokine mRNA by RT-PCR and intracellular cytokines by flow cytometry following RSV challenge of vaccinated mice were therefore compared. Lung eosinophilia was associated with enhanced local recruitment of CD4+ cells in G sensitized mice, while CD8+ cells dominated in mice vaccinated with the viral fusion protein (F) or second matrix protein (**M2**). Lung eosinophilia was also associated with a localized reduction in IFN-gamma and increased IL-4 and

IL-5 mRNA transcription as well as elevated RSV specific IgG1 **antibody** production. Th2 cytokine protein production by T cells showed no apparent change. Although IFN-gamma production diminished in eosinophilic mice, it remained the major cytokine found in lung T cells. It was concluded that lung eosinophilia can develop despite abundant IFN-gamma production by local T cells, but is associated with a shift in the balance between Th2 and Th1 cytokine production.

L9 ANSWER 11 OF 28 MEDLINE on STN
AN 1998118463 MEDLINE
DN 98118463 PubMed ID: 9454711
TI Reduction of **respiratory syncytial** virus titer in the lungs of mice after intranasal immunization with a chimeric peptide consisting of a single CTL epitope linked to a fusion peptide.
AU Hsu S C; Chargelegue D; Steward M W
CS Department of Infectious and Tropical Diseases, London School of Hvgiene and Tropical Medicine, U.K.
SO VIROLOGY, (1998 Jan 20) 240 (2) 376-81.
Journal code: 0110674. ISSN: 0042-6822.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199802
ED Entered STN: 19980306
Last Updated on STN: 19980306
Entered Medline: 19980220
AB In the work described here, the effect of intranasal immunization of BALB/c mice with synthetic chimeric peptides consisting of a cytotoxic T-cell epitope (amino acids 81-95) from the **M2** protein of **respiratory syncytial** virus (**RSV**) and a fusion peptide (amino acids 113-131) from the F1 protein of measles virus on response to challenge with **RSV** has been assessed. Three intranasal immunizations with the chimeric peptides without adjuvant induce peptide- and **RSV**-specific cytotoxic T-cell responses (**CTL**) at 1 or 3 weeks after the third immunization. The **CTL** responses significantly declined at 6 weeks after immunization. Furthermore, viral load in the lungs following challenge with **RSV** was significantly reduced in mice **immunized** with the F/**M2**:81-95 chimeric peptide compared to control animals at 1 or 3 weeks after immunization and no reduction of **RSV** titers was detectable 6 weeks after immunization. The **CTL** activity induced by F/**M2**:81-95 was therefore short-lived (less than 6 weeks) but was significantly correlated with the reduction in viral load in the lungs.

L9 ANSWER 12 OF 28 MEDLINE on STN
AN 1998062142 MEDLINE
DN 98062142 PubMed ID: 9400970
TI Recombinant vaccinia viruses expressing the F, G or N, but not the **M2**, protein of bovine **respiratory syncytial** virus (BRSV) induce resistance to BRSV challenge in the calf and protect against the development of pneumonic lesions.
AU Taylor G; Thomas L H; Furze J M; Cook R S; Wyld S G; Lerch R; Hardy R; Wertz G W
CS Institute for Animal Health, Compton, Newbury, Berkshire, UK..
animal.health@bbsrc.ac.uk
NC AI 20181 (NIAID)
SO JOURNAL OF GENERAL VIROLOGY, (1997 Dec) 78 (Pt 12) 3195-206.
Journal code: 0077340. ISSN: 0022-1317.

L9 ANSWER 13 OF 28 MEDLINE on STN
AN 1998037604 MEDLINE
DN 98037604 PubMed ID: 9371553
TI Recombinant **respiratory syncytial** virus from which the entire SH gene has been deleted grows efficiently in cell culture and exhibits site-specific attenuation in the respiratory tract of the mouse.
AU Bukreyev A; Whitehead S S; Murphy B R; Collins P L
CS Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, Bethesda, Maryland 20892-0720, USA.
SO JOURNAL OF VIROLOGY, (1997 Dec) 71 (12) 8973-82.
Journal code: 0113724. ISSN: 0022-538X.

L9 ANSWER 14 OF 28 MEDLINE on STN
AN 97420031 MEDLINE
DN 97420031 PubMed ID: 9274537
TI A monoclonal antibody pool for routine immunohistochemical detection of human **respiratory syncytial** virus **antigens** in formalin-fixed, paraffin-embedded tissue.
AU Wright C; Oliver K C; Fenwick F I; Smith N M; Toms G L
CS Department of Pathology, University of Newcastle upon Tyne, U.K.
SO JOURNAL OF PATHOLOGY, (1997 Jun) 182 (2) 238-44.
Journal code: 0204634. ISSN: 0022-3417.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199709
ED Entered STN: 19970922
Last Updated on STN: 19970922
Entered Medline: 19970908
AB Four monoclonal **antibodies** (MAbs) with specificities for epitopes on human **respiratory syncytial** virus (**RSV**) proteins preserved after formalin fixation and paraffin embedding were identified in fixed and embedded virus-infected HEp-2 cell pellets. The MAbs bound epitopes on the fusion protein, the nucleoprotein, the phosphoprotein, and the **M2** protein of the virus. Following high-temperature **antigen** unmasking, immunohistochemical staining revealed **RSV antigens** in the lungs of five of seven children who died with confirmed **RSV** infection and in none of nine children who died for other reasons, with no evidence of **RSV** infection. Staining was cytoplasmic, granular, and confined to epithelial cells. Intense staining was seen at the apex of ciliated bronchial and bronchiolar epithelial cells in all five positive cases. In one case, of pneumonitis, infected pneumocytes were present in the alveoli and in several cases, CD68-positive, cytokeratin-negative alveolar macrophages stained for viral **antigens**. These **antibodies** may prove useful in studies of the pathogenesis of **RSV** infection.

L9 ANSWER 15 OF 28 MEDLINE on STN
AN 96005823 MEDLINE
DN 96005823 PubMed ID: 7558120
TI The induction of **respiratory syncytial** virus-specific cytotoxic T-cell responses following immunization with a synthetic peptide containing a fusion peptide linked to a cytotoxic T lymphocyte epitope.
AU Hsu S C; Shaw D M; Steward M W
CS Department of Clinical Sciences, London School of Hygiene & Tropical Medicine, UK.
SO IMMUNOLOGY, (1995 Jul) 85 (3) 347-50.
Journal code: 0374672. ISSN: 0019-2805.
CY ENGLAND: United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199511
ED Entered STN: 19951227
Last Updated on STN: 19951227
Entered Medline: 19951106
AB Previously published work has shown that a cytotoxic T-cell epitope (**CTL**) representing residues 82-90 of the **M2** protein of respiratory syncytial virus (RSV) is the target for a protective response against the virus. In this report, we demonstrate that a synthetic peptide representing residues 81-95, when covalently linked to a fusion peptide derived from the conserved N-terminal 19 residues of the F1 protein of measles virus efficiently primes RSV-specific **CTLs** in vivo following immunization without adjuvant.

L9 ANSWER 16 OF 28 MEDLINE on STN
AN 93124539 MEDLINE
DN 93124539 PubMed ID: 8419638
TI The cytolytic activity of pulmonary CD8+ lymphocytes, induced by infection with a vaccinia virus recombinant expressing the **M2** protein of **respiratory syncytial** virus (**RSV**), correlates with resistance to **RSV** infection in mice.
AU Kulkarni A B; Connors M; Firestone C Y; Morse H C 3rd; Murphy B R
CS Respiratory Viruses Section, National Institute of Allergy and Infectious Diseases, Bethesda, Maryland 20892.
SO JOURNAL OF VIROLOGY, (1993 Feb) 67 (2) 1044-9.
Journal code: 0113724. ISSN: 0022-538X.

L9 ANSWER 17 OF 28 MEDLINE on STN
AN 92114160 MEDLINE
DN 92114160 PubMed ID: 1731105
TI Resistance to **respiratory syncytial** virus (**RSV**) challenge induced by infection with a vaccinia virus recombinant expressing the **RSV M2** protein (Vac-**M2**) is mediated by CD8+ T cells, while that induced by Vac-F or Vac-G recombinants is mediated by **antibodies**.
AU Connors M; Kulkarni A B; Collins P L; Firestone C Y; Holmes K L; Morse H C 3rd; Murphy B R
CS Respiratory Viruses Section, National Institute of Allergy and Infectious Diseases, Bethesda, Maryland 20892.
SO JOURNAL OF VIROLOGY, (1992 Feb) 66 (2) 1277-81.
Journal code: 0113724. ISSN: 0022-538X.

L9 ANSWER 18 OF 28 MEDLINE on STN
AN 91220716 MEDLINE
DN 91220716 PubMed ID: 2024493
TI Cytotoxic T cell activity against the **22-kDa** protein of human **respiratory syncytial** virus (**RSV**) is associated with a significant reduction in pulmonary **RSV** replication.
AU Nicholas J A; Rubino K L; Levely M E; Meyer A L; Collins P L
CS Department of Infectious Diseases, Upjohn Laboratories, Kalamazoo, Michigan 49007.
SO VIROLOGY, (1991 Jun) 182 (2) 664-72.
Journal code: 0110674. ISSN: 0042-6822.

L9 ANSWER 19 OF 28 MEDLINE on STN
AN 91140764 MEDLINE
DN 91140764 PubMed ID: 1995956
TI **Respiratory syncytial** virus (**RSV**) F, G,

M2 (22K), and N proteins each induce resistance to **RSV** challenge, but resistance induced by **M2** and N proteins is relatively short-lived.

AU Connors M; Collins P L; Firestone C Y; Murphy B R

CS Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, Bethesda, Maryland 20892.

SO JOURNAL OF VIROLOGY, (1991 Mar) 65 (3) 1634-7.
Journal code: 0113724. ISSN: 0022-538X.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199103

ED Entered STN: 19910412
Last Updated on STN: 19910412
Entered Medline: 19910327

AB The ability of recombinant vaccinia viruses that separately encoded 9 of the 10 known **respiratory syncytial** virus (**RSV**) proteins to induce resistance to **RSV** challenge was studied in BALB/c mice. Resistance was examined at two intervals following vaccination to examine early (day 9) as well as late (day 28) **immunity**. BALB/c mice were inoculated simultaneously by the intranasal and intraperitoneal routes with a recombinant vaccinia virus encoding one of the following **RSV** proteins: F, G, N, P, SH, M, 1B, 1C, or **M2** (22K). A parainfluenza virus type 3 HN protein recombinant (Vac-HN) served as a negative control. One half of the mice were challenged with **RSV** intranasally on day 9, and the remaining animals were challenged on day 28 postvaccination. Mice previously **immunized** by infection with **RSV**, Vac-F, or Vac-G were completely or almost completely resistant to **RSV** challenge on both days. In contrast, immunization with Vac-HN, -P, -SH, -M, -1B, or -1C did not induce detectable resistance to **RSV** challenge. Mice previously infected with Vac-**M2** or Vac-N exhibited significant but not complete resistance on day 9. However, in both cases resistance had largely waned by day 28 and was detectable only in mice **immunized** with Vac-**M2**. These results demonstrate that F and G proteins expressed by recombinant vaccinia viruses are the most effective **RSV** protective **antigens**. This study also suggests that **RSV vaccines** need only contain the F and G glycoproteins, because the **immunity** conferred by the other proteins is less effective and appears to wane rapidly with time.

L9 ANSWER 20 OF 28 MEDLINE on STN

AN 90204680 MEDLINE

DN 90204680 PubMed ID: 2319650

TI The 22,000-kilodalton protein of **respiratory syncytial** virus is a major target for Kd-restricted cytotoxic T lymphocytes from mice primed by infection.

AU Openshaw P J; Anderson K; Wertz G W; Askonas B A

CS National Institute for Medical Research, Mill Hill, London, United Kingdom.

NC AI 20181 (NIAID)
AI R37 12464 (NIAID)
T-32-HL 07553 (NHLBI)

SO JOURNAL OF VIROLOGY, (1990 Apr) 64 (4) 1683-9.
Journal code: 0113724. ISSN: 0022-538X.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199005
ED Entered STN: 19900601
Last Updated on STN: 19900601
Entered Medline: 19900503
AB Recombinant vaccinia viruses containing the **22-kilodalton** protein (matrixlike or 22K protein) or phosphoprotein gene from **respiratory syncytial** virus were constructed. These recombinant viruses expressed proteins which were immunoprecipitated by appropriate **respiratory syncytial** virus **antibodies** and comigrated with authentic proteins produced by **respiratory syncytial** virus infection. The new recombinant viruses (and others previously described containing the attachment glycoprotein, fusion, or nucleoprotein genes of **respiratory syncytial** virus) were used to infect target cells for cultured polyclonal cytotoxic T lymphocytes generated from the spleens of BALB/c or DBA/2 mice primed by intranasal infection with **respiratory syncytial** virus. **Respiratory syncytial** virus-specific cytotoxic T lymphocytes (**CTL**) showed strong Kd (but not Dd)-restricted recognition of the 22K protein. As previously reported, the fusion protein and nucleoprotein were both seen by **CTL**, but recognition of these proteins was comparatively weak. There was no detectable recognition of other **respiratory syncytial** virus proteins tested (including phosphoprotein). 22K protein-specific splenic memory **CTL** persisted for at least 11 months after infection of BALB/c mice. Priming BALB/c mice with recombinant vaccinia virus containing the 22K protein gene induced **respiratory syncytial** virus-specific memory **CTL** at lower levels than that previously reported following infection with a similar recombinant containing the fusion protein gene. These data identify the 22K protein as a major target **antigen** for **respiratory syncytial** virus-specific **CTL** from H-2d mice primed by **respiratory syncytial** virus infection.

L9 ANSWER 21 OF 28 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2001:50824 CAPLUS
DN 134:114832
TI Attenuated **respiratory syncytial** virus **vaccines** involving modification of **M2** ORF2
IN Collins, Peter L.; Murphy, Brian R.; Bermingham, Alison
PA United States Department of Health and Human Services, USA
SO PCT Int. Appl., 124 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001004321	A1	20010118	WO 2000-US18534	20000707
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 2000059181	A5	20010130	AU 2000-59181	20000707
PRAI	US 1999-143097P	P	19990709		
	WO 2000-US18534	W	20000707		

L9 ANSWER 22 OF 28 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1991:677330 CAPLUS
DN 115:277330
TI Mechanism of protection against infection with human **respiratory syncytial** virus by immunization with a recombinant vaccinia virus expressing the **22-kD** protein
AU Nicholas, Judith A.; Rubino, Kathleen L.; Levely, Melissa E.; Meyer, Annette L.; Collins, Peter L.
CS Dep. Infect. Dis., Upjohn Lab., Kalamazoo, MI, 49007, USA
SO Vaccines 91: Mod. Approaches New Vaccines Incl. Prev. AIDS, [Annu. Meet. Mod. Approaches New Vaccines], 8th (1991), Meeting Date 1990, 289-92. Editor(s): Chanock, Robert M. Publisher: Cold Spring Harbor Lab., Plainview, N. Y.
CODEN: 57HGAV

L9 ANSWER 23 OF 28 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1988:110457 CAPLUS
DN 108:110457
TI The purification of four **respiratory syncytial** virus proteins and their evaluation as protective agents against experimental infection in BALB/c mice
AU Routledge, E. G.; Willcocks, M. M.; Samson, A. C. R.; Morgan, L.; Scott, R.; Anderson, J. J.; Toms, G. L.
CS Dep. Virol., Univ. Newcastle upon Tyne, Newcastle upon Tyne, NE1 7RU, UK
SO Journal of General Virology (1988), 69(2), 293-303
CODEN: JGVIAY; ISSN: 0022-1317
DT Journal
LA English
AB The fusion (F) glycoprotein, large glyco-(G) protein, phospho-(P) protein, and **22 kilodalton** (K) protein of **respiratory syncytial** (RS) virus A2 strain were purified by a combination of immunoaffinity adsorption and preparative SDS-PAGE. All 4 proteins elicited serum **antibody** in mice after repeated inoculation in adjuvant, although the magnitude of the response as measured by ELISA varied from mouse to mouse. The F protein generated neutralizing **antibodies** in only 50% of the mice detd. to be seropos. by ELISA. The G protein also induced neutralizing **antibodies** but in this instance neutralization tests and ELISA titers were more closely correlated. No neutralizing activity was detected in mice **immunized** with the P or 22K proteins although all produced **antibody** detectable by ELISA. Mice **immunized** with either the F or the G protein were protected against subsequent RS virus challenge, whether they had developed neutralizing **antibody** or not. Mice inoculated with the P or 22K proteins were not protected.

L9 ANSWER 24 OF 28 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 2001:278532 BIOSIS
DN PREV200100278532
TI The impaired function of **respiratory syncytial** virus-specific CD8+ T cells generated in vivo during infection.
AU Chang, Jun (1); Braciale, Thomas J. (1)
CS (1) University of Virginia, Charlottesville, VA, 22908 USA
SO FASEB Journal, (March 7, 2001) Vol. 15, No. 4, pp. A304. print.
Meeting Info.: Annual Meeting of the Federation of American Societies for Experimental Biology on Experimental Biology 2001 Orlando, Florida, USA March 31-April 04, 2001
ISSN: 0892-6638.
DT Conference
LA English
SL English

AB **Respiratory Syncytial** Virus (**RSV**) is a major cause of respiratory tract disease in young children. At present, there is no licensed **vaccine** against **RSV** and the cell mediated **immunity** to **RSV** has been shown to both confer resistance to infection and to induce enhanced injury. In the H-2d BALB/c mouse, CD8+ cytotoxic T lymphocyte responses to a dominant 9 amino acid-Kd restricted epitope on the **22kD** matrix 2 protein (**M2**/82-90) has been shown to confer protection against **RSV** challenge. In the current study, we developed tetrameric Kd complexes containing the **M2**/82-90 peptide (M2Tet) to directly visualize and quantify **M2**-specific **CTLs** in the lung during **RSV** infection. M2Tet+ CD8+ T cells constitute apprx25% of the activated CD8+ T cells by day 9 during primary infection and apprx80% by day 6 during memory infection, respectively. More than 90% of these M2Tet+ cells are CD44hiCD62LloCD11ahi phenotype. However, only apprx30-50% of lung M2Tet+ CD8+ T cells produce IFN-gamma when stimulated with **M2**/82-90 peptide whereas apprx90% of M2Tet+ cells made IFN-gamma when the cells were generated in vitro with peptide from **immune** splenocytes. In addition, ex vivo **CTL** assay showed that these M2Tet+ CD8+ T cells infiltrated to the lungs have lower killing activity against peptide-coated target cells than in vitro generated effector cells. Intracellular perforin staining showed that only IFN-gamma producing cells up-regulated perforin expression during stimulation. These results suggest that **M2**/82-90-specific CD8+ T cells generated in response to **RSV** infection and recruited to the lungs may have defects in their effector function including **antigen**-dependent cytokine production and killing of virus-infected target cells.

L9 ANSWER 25 OF 28 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1994:76710 BIOSIS
DN PREV199497089710
TI Development of **respiratory syncytial** (RS) virus specific human CD4 positive T-lymphocyte lines.
AU Anderson, J. J.; Turnbull, T. J. B.; Toms, G. L.; Scott, R. (1)
CS (1) Dep. Virol., Med. Sch., Univ. Newcastle upon Tyne, Framlington Place, Newcastle upon Tyne NE2 3HH UK
SO Immunology & Infectious Diseases (Oxford), (1993) Vol. 3, No. 4, pp. 346-349.
ISSN: 0959-4957.
DT Article
LA English
AB T-cell lines were developed from human adult peripheral blood by repeated stimulation with **respiratory syncytial** (RS) virus **antigen** and were found to respond in a virus-specific manner in lymphocyte proliferation assays. The lines were CD3+, CD4+, CD8- and were found to secrete interleukin-2 (IL-2) in vitro when challenged with virus **antigen**. One of the lines (RSc 1) recognized predominantly the phosphoprotein P (34K) of the virus and to a lesser extent the **M2** (22K) protein and the fusion (F) protein. The attachment glycoprotein (G) was not recognized by the RSc 1 line.

L9 ANSWER 26 OF 28 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1993:193257 BIOSIS
DN PREV199395103707
TI Three antigenic variant groups in human **respiratory syncytial** virus subgroup B isolated in Japan.
AU Nagai, K.; Tsutsumi, H. (1); Yamazaki, H.; Pattamadilok, S.; Chiba, S.
CS (1) Dep. Pediatr., Sapporo Med. Coll., Chuoku S-1, W-16 Sapporo 060 Japan
SO Archives of Virology, (1993) Vol. 128, No. 1-2, pp. 55-63.
ISSN: 0304-8608.
DT Article

LA English
AB Nineteen hybridomas producing monoclonal antibodies (MAbs) against the structural proteins of strain 58-17, a subgroup B field strain of **respiratory syncytial** virus (**RSV**) isolated in Japan, were obtained by fusion of X63 myeloma cells with spleen cells from BALB/c mice **immunized** with the virus-infected HEp-2 cells. Seven clones were found to produce antibodies against the fusion protein (F), five against the large glycoprotein (G), five against the nucleoprotein (NP) and two against the 22 k protein by radioimmunoprecipitation assay. By competitive binding assay with the MAbs, at least seven, two, three and one epitopes were defined on the F, G NP and 22 k protein components of subgroup B strain, respectively. Of these epitopes, three, two and one epitopes of the F, G and NP components were different from subgroup A strain, respectively. Fifty-three other field strains of subgroup B isolated in Sapporo, Japan, during nine epidemic years from 1980 to 1989, were examined for reactivity with the MAbs by ELISA. Different reactivity to one anti-NP antibody suggested that the 53 strains can be divided into three groups (B-a: 26 strains, B-b: 26 strains, and one other strain). The dominant strain prevailing during the 1984 to 1988 epidemic years had changed from B-a to B-b. All of the 53 subgroup B strains reacted similarly with the other 18 MAbs.

ANSWER 27 OF 28 SCISEARCH COPYRIGHT 2003 THOMSON ISI on STN
AN 97:40051 SCISEARCH
GA The Genuine Article (R) Number: WA137
TI Identification of potential CTL epitopes of bovine **RSV** using allele-specific peptide motifs from bovine MHC class I molecules
AU Gaddum R M (Reprint); Ellis S A; Willis A C; Cook R S; Staines K A; Thomas L H; Taylor G
CS INST ANIM HLTH, NEWBURY RG20 7NN, BERKS, ENGLAND (Reprint); UNIV OXFORD, DEPT BIOCHEM, MRC, IMMUNOCHEM UNIT, OXFORD OX1 3QU, ENGLAND
CYA ENGLAND
SO VETERINARY IMMUNOLOGY AND IMMUNOPATHOLOGY, (NOV 1996) Vol. 54, No. 1-4, pp. 211-219.
Publisher: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS.
ISSN: 0165-2427.

L9 ANSWER 28 OF 28 SCISEARCH COPYRIGHT 2003 THOMSON ISI on STN
AN 91:125814 SCISEARCH
GA The Genuine Article (R) Number: EY750
TI **RESPIRATORY SYNCYTIAL** VIRUS (**RSV**) F-PROTEIN, G-PROTEIN, **M2**-PROTEIN (22K), AND N-PROTEINS EACH INDUCE RESISTANCE TO **RSV** CHALLENGE, BUT RESISTANCE INDUCED BY **M2**-PROTEINS AND N-PROTEINS IS RELATIVELY SHORT-LIVED
AU CONNORS M (Reprint); COLLINS P L; FIRESTONE C Y; MURPHY B R
CS NIAID, INFECT DIS LAB, BLDG 7, ROOM 100, BETHESDA, MD, 20892 (Reprint)
CYA USA
SO JOURNAL OF VIROLOGY, (1991) Vol. 65, No. 3, pp. 1634-1637.